UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
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ART UNIT	PAPER NUMBER
2155	

DATE MAILED: 10/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	Application No.	Applicant(s)
	09/678,549	CORDOVA, ROIS O.
	Examiner	Art Unit
	Vitali Korobov	2155

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>27 June 2005</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____ .

Response to Amendment

1.   This Office Action is in response to remarks filed on 06/27/2005. Claims 1-

26 are pending. None of the claims was amended in response to the Office Action on

4/21/2005.

Claim Objections

2.   Claim 6 is objected to because of the following informalities: line 2 of the

claim, word "forwards" is assumed by the Examiner to mean "to forward". Appropriate

correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 1, 5-6, 9-11, 15-16, and 19-26 are rejected under 35 U.S.C. 103(a)

as being unpatentable over the U. S. Patent No. 6,052,721 to Shepherd (hereinafter

Shepherd) in view of the U. S. Patent No. 5,850,396 to Gilbert (hereinafter Gilbert) and

further in view of the U. S. Patent No. 6,256,668 to Slivka et al. (hereinafter Slivka).

In considering claims 1, 11, 21, and 25, Shepherd discloses a system and

method for distributing software to a plurality of automated teller machines, the system

comprises: forwarding a software package and a list of addressees to a first

processor-based system; (col. 3, lines 35-41); and forward said software package

together with at least part of said list of addresses to a second processor-based system,

said second processor-based system being on said list of addressees (col. 3, lines

43-58, where the limitation of forwarding of a software package is met by issuing an

XFR command, and the limitation of sending a list of addressees is met by supplying a

"Destination" parameter as part of the XFR command).

While Shepherd discloses the invention substantially as claimed, Shepherd does

not explicitly disclose a stand-alone list of addressees to a first processor-based

system.

Including a list of addressees or nodes in a forwarded data package, indicative

the package's recipients, is well known in the art as evidenced by Gilbert, an analogous

art, related to a message distribution to multiple destinations. Gilbert discloses a system

for multicast message distribution, wherein the network has an originating node that

sends a message for ultimate receipt by a subset of nodes in a polynomial expansion

manner. The originating node sends a message to a limited number of nodes; each

node also receives a unique list of other nodes that should ultimately receive the

message. Each of these other nodes then sends the message to one or more nodes on

its list, along with a unique subsist of nodes that still have not received the message

(see Gilbert col. 5, lines 19-23).

Given the teachings of Gilbert, it would have been obvious to a person having

ordinary skill in the art to modify the software distributing system disclosed by Shepherd

to include the unique node list as taught by Gilbert in order to achieve the advantage of

tying up the originating node for a reduced amount of time while it transmits the

message, as compared to the prior art (Gilbert, col. 2, lines 22-25). Therefore, the

aforementioned limitations would have been an obvious modification to the system

disclosed by Shepard.

Additionally, Shepard fails to explicitly disclose that the software package

includes instructions enabling said first processor-based system to automatically install

said software package and forward said software package automatically.

Nonetheless, a software package including an executable file containing

installation instructions or setup instructions i.e. install.exe, autorun.exe or setup.exe

that executes and installs the software without user input is well known in the art as

evidenced by Slivka. In similar art Slivka discloses that an extractor in the self-extracting

executable file extracts and decompresses all file including the installation file i.e.

setup.exe, and automatically starts the installation program (see Slivka col. 18, lines

62-67).

A person having ordinary skill in the art would have readily recognized the

advantages of including an executable file containing setup or installation instructions

that will automatically install, both for the developers of the computer software (savings

on support, distribution, and advertising costs) and for the user, who calls the update

service or network service, and automatically obtains up-to-date versions of available

computer software, and may never encounter defects which would have been

encountered using an earlier, defective version of the computer software (Slivka, col. 3,

lines 33-51).

In considering claims 5 and 15, while Shepherd further discloses forwarding a

transfer complete message to the management station to advise the management

station that the software package has been transmitted to the specified terminal (col. 3,

lines 59-67), Shepherd does not disclose sending the software package together with a

checksum to enable the second processor based system to confirm with the first

processor-based system that the software package was received correctly.

Nonetheless, the method of receipt confirmation is merely a design choice and would

not change the overall functionality of the system. It would have been obvious to a

person having ordinary skill in the art to include sending the software package along

with a checksum to confirm that the software package was received correctly as an

alternate delivery confirmation method, Therefore, the claimed limitation would have

been an obvious modification the system disclosed by Shepherd.

In considering claims 6 and 16, Shepherd further discloses including causing

said first processor-based system to forward said software package to said second and

a third processor-based system (col. 4, lines 43-51).

In considering claims 9 and 19, Shepherd further discloses transferring said

software package together with software that enables said second processor-based

system to transfer said software package to a third processor-based system (col. 4,

lines 20-27).

In considering claims 10 and 20, Shepherd further discloses enabling said first

processor based system to forward said software package to said second

processor-based/ system during a low activity time on said first processor-based system

(col. 4, line 28-42).

In considering claims 22, Shepherd further discloses a system wherein the

device is a server. (While Shepherd does not refer to the device 12 of fig. 1, as a server,

it performs all of the functions of a server and is therefore functionally equivalent to a

server).

In considering claims 23, Shepherd further discloses wherein said server is a

network management server (see fig. 1, means (12)).

In considering claims 24, Shepherd further discloses wherein said device is a

client (see fig. 1, means (16-1-n)).

In considering claim 26, although the combined system of Shepard, Gilbert, and

Slivka discloses the system substantially as claimed it does not disclose enabling the

first processor-based system to automatically delete its address from the list of

addresses before forwarding said list to said second processor-based system.

Nonetheless, the aforementioned limitation would have been an obvious modification

the to the combined system. It would have been obvious to a person having ordinary

skill in the art to include the step of to automatically delete its address from the list of

addresses before forwarding said list to said second processor-based system in order to

avoid receiving the software package multiple time thus reducing unnecessary system

processing time. Therefore, the claimed limitation would have been an obvious

modification to the combined system of Shepard, Gilbert, and Slivka.

4.   Claims 2-4, 7-8, 12-14, and 17-18 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Shepard in view of Gilbert in further view of Mapson (WO

98/33296).

In considering claims 7-8, and 17-18, while the combined system of Shepherd

and Gilbert discloses the system substantially as claimed, the system does not disclose

the step of encrypting the software package for transmission between said first and

second processor-based systems and changing the encryption in a known fashion with

each successive transfer from one to the next processor-based system.

Nonetheless, encrypting software packages and changing the encryption with

each transfer of the software was well known to one skilled in the relevant art at the time

the invention was made as evidenced by the teachings of Mapson.

In similar art, Mapson discloses a distribution system with authentication that

provides a method of distributing one or more copies of goods and/or services wherein

the Integrity Check Value (ICV) is recalculated in a manner determinable from both the

first location and the product. The product, including the recalculated ICV; is then

distributed to a second location remote from the first location where the IVC of the

distributed product is compared to the IVC known to the first location (see Mapson,

page 1, lines 30-32; through page 2, lines 1-9). Therefore, one of ordinary skill in the art

would have found it obvious to incorporate and implement the recalculated 1CV in

Shepherd's system in order to ensure the integrity of software distributed over an at

least partially insecure network.

In considering claims 2 and 12, Mapson further discloses enabling said first

processor-based system to install said software package on said first processor-based

system, make a copy of said software package, and transmit said software package to

said second processor-based system (see Mapson, page 2, lines 7-8).

In considering claims 3 and 13, Mapson further discloses causing said first

processor-based system to automatically authenticate said software package (see

Mapson, page 4, lines 31-32 through page 5, lines 1-2 and 15-16).

In considering claims 4 and 14, Mapson further discloses causing said second

processor-based system to automatically authenticate said software package by

sending a message to said first processor-based system (see Mapson, page 8, lines

23-29).

5.   **Examiner's note:** Examiner has cited particular columns and line
numbers in the references as applied to the claims above for the convenience of the
applicant. Although the specified citations are representative of the teachings of the art
and are applied to the specific limitations within the individual claim, other passages and
figures may apply as well. It is respectfully requested from the applicant in preparing
responses, to fully consider the references in entirety as potentially teaching all or part
of the claimed invention, as well as the context of the passage as taught by the prior art
or disclosed by the Examiner.

Response to Arguments

6.   Applicant's arguments filed on 06/27/2005 have been fully considered but

they are not persuasive.

The Applicant argues – *"The first processor-based system is enabled to automatically install the package and automatically forward the package, together with at least part of said list of addressees, to a second processor-based system."* (§1, 2nd sentence).

The Examiner respectfully submits, that Slivka teaches automatic installation of software (see the Abstract), and Shepherd teaches automatic forwarding (decision block 88 of Fig. 4A). Even if the teaching of automatic forwarding and automatic installation were not clearly provided in the cited references, the reference may not be deemed deficient based on the fact that it performs a certain operation manually instead of automatically, since it has been held that broadly providing a mechanical or automatic means to replace manual activity which has accomplished the same result involves only routine skill in the art. *In re Venner, 120 USPQ 192.*

The Applicant argues – *"Even if one were to accept the combinabilities of the diverse, plural cited references, they do not teach forwarding the installation package, as well as the list."* (§3, 1st sentence).

The Examiner respectfully disagrees. Even if one were to overlook the fact that simultaneous forwarding of the software package and the list of addressees has been amended out of the latest version of the claims, Shepherd, in col. 3, lines 42-51 states the following: "If at block 88 it is found that there are terminals listed in the database 32 as having received the software package, then the flowchart proceeds to block 98, and a TRANSFER command is sent to one or more of the terminals 16. The TRANSFER command has the format XFR (Filename, Destination), where "Filename" identifies the

software package and "Destination" identifies a terminal which is to receive the software

package from a terminal which has received the TRANSFER command." clearly

indicating that both the file and the list of destinations are being forwarded. In addition,

Gilbert in col. 5, lines 18-22 teaches: "Under the present invention, each receiving node

knows the other receiving nodes to which it must send the message because along with

the message itself the node may also receive a list of nodes that have still not received

the message. If a particular receiving node does not receive such a list of nodes, then it

does not pass along the message to any other nodes." Since the message may contain

software instructions, simultaneous forwarding of software and addressees to receive is

clearly taught by Gilbert.

The Applicant further argues, regarding Slivka – *"It does not forward the*

installation package." **(§3, last sentence).**

The Examiner respectfully disagrees and refers the Applicant to the above

rejection, where Slivka was clearly cited for his teaching of a secure, self-extracting

executable distribution file, not for his teaching of forwarding of the installation package

to other computers.

The Applicant still further argues – *"The reason that none of the cited*

references teach the claimed invention is that none of them contemplated the

self-perpetuating system only conceived of by the present inventor." (§4, 1st

sentence)."

The Examiner disagrees and respectfully submits that the concept allegedly

conceived by the Applicant, has been well known in the art for well over 50 years, since

the first theories on self-replicating programs (or self-perpetuating programs, as the

applicant refers to them) were developed in 1949. Then, in 1978, John Shoch and Jon

Hupp at the Xerox Palo Alto Research Center first reduced to practice what they called

a "computer worm". The Examiner submits that the invention of the Applicant teaches

essentially the same capabilities and operates essentially in the same fashion as a

computer worm.

Some of the well known capabilities of computer worms are as follows:

a. Once created, a worm can copy itself automatically;

b. A worm can send itself automatically to another host;

c. Upon arrival, a worm automatically installs itself, automatically replicates itself

and automatically sends itself to additional hosts on a list of addresses found on the

host, or on the list of addresses a worm can carry with it as a payload.

In other words, a computer worm is a self-replicating, or self-perpetuating

computer program or software, similar to a computer virus, with one important

distinction: unlike a virus, a worm is self-contained, and does not need to be a part of

another program to execute, replicate or propagate itself. The worms are commonly

written to exploit the file transmission capabilities found in many of today's computers.

Numerous relevant computer science publications disclose that in addition to

replication, a worm may be designed to do any number of things, such as delete or

modify files on a host computer system, or send files via e-mail, or via unicast, multicast

or broadcast capabilities available on the host computer. In addition, the worms are well

known in the art to be so called "multi-headed", or carry other executables as a payload,

such as instructions to self-install, self-replicate or transmit itself to other computers, automatically, and without user concept or intervention, which would defeat the purpose of many of the worms that have malicious intent (such as the "Morris worm", released into the Internet on Nov. 2, 1988, "Mydoom", "Sobig" and "Doomjuice", to name just a few).

Anticipating a possible rebuttal by the Applicant to the effect that the proposed invention has no malicious intent of the known computer worms, and therefore has a different utility, the Examiner would like to point out, that there have been numerous attempts in the past to apply the concept of computer worms for useful purposes, such as an automated cascading software distribution. For example, Wikipedia offers this information regarding a considerable debate among computer scientists on whether worms can be useful. "The Nachi family of worms, for example, tried to download and then install patches from Microsoft's website to fix various vulnerabilities in the host system (the same vulnerabilities that they exploited). This eventually made the systems affected more secure, but generated considerable network traffic - often more than the worms they were protecting against - rebooted the machine in the course of patching it, and, maybe most importantly, did its work without the explicit consent of the computer's owner or user. As such, most security experts deprecate worms, whatever their payload." This citation is provided as a matter of general interest, related to the instant application, and should not be misconstrued as an attempt to pass any judgment regarding the relative merits of the proposed invention.

The Applicant's arguments regarding the rejection of claims 1-26 under 35 USC

§ 112 have been considered and found to be persuasive. Therefore, the rejection of

claims 1-26 under 35 USC § 112 is hereby withdrawn.

Conclusion

6.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of

time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Vitali Korobov whose telephone number is 571-272-

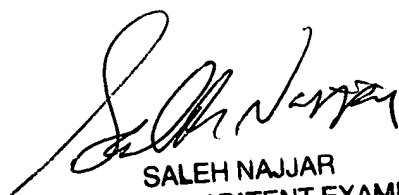7506. The examiner can normally be reached on Mon-Friday 8a.m. - 4:30p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Saleh Najjar can be reached on (571)272-4006. The fax phone number for

the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

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Vitali Korobov
Examiner
Art Unit 2155

VAK
10/05/2005

SALEH NAJJAR
SUPERVISORY PATENT EXAMINER